



Grain

■ ELEVATOR OPERATION
AND MAINTENANCE

November
1936

Sextuplets

Let Papa and Mama Dionne look to their laurels! GRAIN is the proud father of SIX babies—six little issues of the magazine! (EDITOR'S NOTE: And we didn't have Doctor Dafoe either — just Doctor Dean . . .) Like all babies, GRAIN may sometimes give you that damp feeling but, according to last season's drouth reports, that's what the grain trade needs. And all the little six issues of GRAIN confidently jump into your respective laps knowing that your paternal feeling will excuse any waywardness of the offspring of you grain men.

*Excuse enough for a six month old child! Let's get down to bin bottom. This Sixth Edition is going to be six times better than any preceeding issue. It's the same in an Elevator—the Superintendent continually tries to make each day better than the day before. If he succeeds, he is a SUPERINTENDENT . . . if he doesn't succeed, he's a *superintendent*. Realizing this, this little magazine hopes it will always be able to spell in capital letters—GRAIN!*

Who Is to Blame?

THE fancy wheat buyer doesn't "shop around" for the best bargain. No, he has an able representative somewhere that gives him exactly what he wants. Looking for the top grade at poor quality prices is futile.

Elevator owners and operators might profit equally well by applying this logical thought to their properties, their erection and rejuvenation.

At a recent gathering of Elevator Superintendents the poor construction and thinness of concrete walls, which sooner or later leads to endless other woes, was layed at the doorstep of competitive bid-

ding. "Never," they decided, "should a bin wall be less than eight inches thick."

"An apple a day," "See your Dentist twice a year," "Have your eyes checked every two years." all are a "stitch in time"; and when we have ourselves checked up we employ the best talent our purse can afford.

Is building a new elevator or remodeling an old one any different? If we asked Doctors, Dentists, Occulists to submit competitive bids on our own structures could we expect more than we get by following the same procedure with our elevators?

Editorial

by DEAN M. CLARK

THE LITTLE THINGS

A nail doesn't make an Elevator—but it can break one.

The Elevator is much like the human body; as a whole it is a perfect machine yet its complete functioning depends upon each of its integral parts. The neglect of a fingernail has caused many a human body to sicken and collapse. The neglect of a nail in an Elevator has caused many a fire and many an accident loss. As a result, the efficiency of the plant has been destroyed—by a *little thing* like a nail.

There are countless quotations and sayings extant in our language today emphasizing the importance of the little things. "A chain is no stronger than its weakest link;" "For want of a nail the battle was lost;" "Take care of the pennies and the dollars will take care of themselves," are a few of the time-proven truths past generations have bequeathed us. We recognize their value and with great diligence eternally search for the weakest link, knowing that upon it depends the battle and upon the outcome of the battle depends the profit of victory or the loss of defeat.

There is no profit, and never can be, in neglecting the little things. True, a plant may function despite neglect of minor repairs but it doesn't function completely. And after a short period of sub-par efficiency the cost ledger acquires an increasing amount of red ink until the day of reckoning arrives—the day of reckoning, when it is suddenly discovered that the little things which should have been keenly watched have grown to major calamities . . . and the plant sickens and collapses.

Grain

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lems in terminal ele-
vators.

\$1 PER YEAR



DEAN M. CLARK - - Publisher
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Spiral Shelf

PREVENTS BROKEN GRAINS

Says JOHN BUSH
of Kingston (Ont.) Elevator Co.

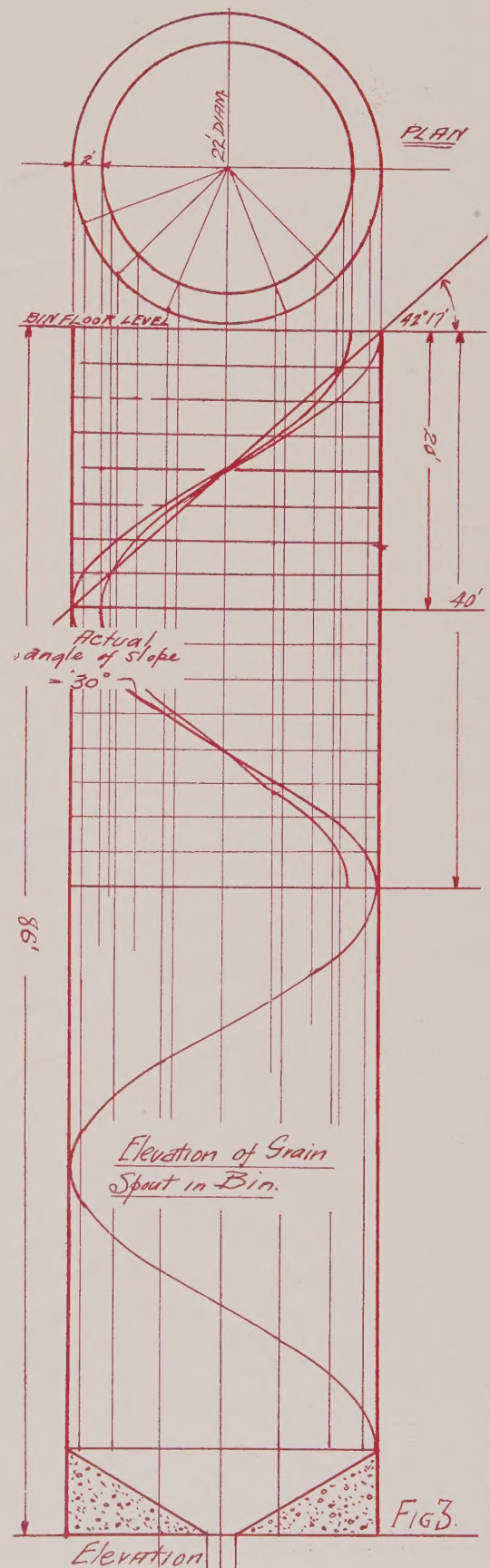
IT HAS been suggested to line hopper bottoms of deep bins with sponge rubber to prevent damage to grain by impact. While the idea would undoubtedly lessen the impact of the first few hundred bushels dropped, it would be of little use thereafter, as it would be covered by the grain dropped. It would be expensive, to say the least, and it is hard to see where the expense would be justified, unless the bin was being drawn at the same time, as is often the case when running direct from scales to steamer through shipping bins.

Although defects may be found in the suggestion illustrated it would be worth a trial. The design and construction of this arrangement is very simple and consists of nothing but a spiral shelf running much the same as a spiral stairway around the interior of the bin wall at an angle of pitch of 30 degrees. In a bin 85 feet in depth two complete turns around the bin is sufficient to accomplish the required angle.

The grain would be fed by a spout as usual to the top of the bin and then run directly to the spiral shelf. This shelf would run much the same as an ordinary spout for the first quarter turn (18 feet) but without a top covering. From thence to the bottom all that would be required would be a side plate which would lie flat against the bin wall and a bottom or sliding surface supported by a bracket.

Centrifugal force would supply the means of keeping the grain on the shelf, which would ride high on the 2 foot wide side plate, therefore no inside plate or side would be necessary. The grain, upon reaching the bottom of the bin, would slide off in a circular sweep and would continue this action until the bin was filled.

Four hundred and forty six feet of plate 2 feet in width would be sufficient to equip a bin 85 feet deep by 22 feet in diameter, and this simple arrangement could be installed at little cost, especially during the construction of a new grain elevator. I do not think there is any fear of the spout pulling



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A new gaseous fumigant now protects stored grain from insect infestation. It is called Proxate and when properly applied, it destroys all insect life in grain stored in concrete, tile, brick or steel bins. Proxate kills insects in all stages — eggs, pupae, larvae, adults.

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Adult granary weevil feeding on kernel

Adult rice weevil feeding on kernel



Adult sawtooth grain beetle



Adult Cadelle

away from the bin as all the pressure or force is directed against the sides of the bin and will therefore tend to support the structure when carrying grain under velocity; and when the bin is drawn the grain on the "shelf" will continually clear itself to the grain level in the bin, thus relieving itself of all resistance.

One feature which must not be overlooked is that the grain upon entering the spout at the top of the bin will gain velocity, the centrifugal force thus created will also increase, will no doubt have a tendency to "narrow" the stream of grain, and at the same time increase its height on the bin wall or flatten itself out. This, of course, would be no objection if the plate or sides of the "shelf" were built high enough to take care of this action at any particular point. Another way this could be overcome would be to build the "shelf" with an increasingly obtuse angle towards the bottom instead of at a right angle as at the top of the bin.

The working of all details pertaining to velocity and angles, etc., would be a very complicated matter and would require the skill of an experienced engineer, but even then, no doubt, they would have to



experiment, which is the best way of solving all problems pertaining to grain, as it acts in very peculiar ways under certain conditions. I would like to know what reactions your readers have to this idea of mine.



DUST EXCELLENT COAL SUPPLEMENT

Dust may cost upwards to \$40 a ton, but practical Superintendents report it always has a fuel value of \$4 a ton when other demands for it are nil. As a fuel supplement grain dust is said to materially enhance the B.T.U. value of the coal consumed along with other advantages. Some plan experiments in the blower-feed type of boiler while another is going to try to make briquets of it.

The Basic Scale

by JOSEPH A. SCHMITZ

WHAT is the basis of all business transactions? There are several answers to this, namely: quality, price and quantity. But how can a price be figured if the quantity isn't there? And quality, no matter how high its value, is rendered nil by the absence of a known quantity. Therefore, all business transactions are based primarily upon a quantitative determination.



JOSEPH A. SCHMITZ

This is especially true in the grain business where a shortage in quantity, if excessive, nullifies the equity of price and quality. In early days, scales were crude affairs and often unreliable. The quantities handled were so small that no one thought of improving conditions until the first terminal markets sprang into existence and the buyers, perforce, had to install better equipment to handle the larger volume. The errors in weight caused by crude scales didn't amount to much when only small lots of grain were handled but in the large volume of grain moving through the new terminal markets those small errors assumed tremendous proportions. Another factor entering into the situation was the development of the endless belt and bucket conveyor which gave rise to the construction of deep bins in place of the old storage floors. This, in turn, brought about the hopper scale installed in the elevator cupola. In some cases, track scales were installed in railroad yards or yards adjacent to the elevator.

What? No Garners?

Where hopper scales were used, the received grain as well as the grain for shipment was weighed in the cupola. These early "carload" scales were considered large enough to weigh the contents of any car. This accounts for the fact that the old time receiving scale had no garner. The shipping scales, however, were always equipped with one so that a predetermined quantity might easily be weighed and also that the stream of grain flowing from the bin would not have to be interrupted during the loading of a ship or a number of cars.

With the increase in capacities of box cars in the early '90's, all these so-called car load capacity scales became obsolete. Capacities of the new scales were increased in an effort to keep up with the ever enlarging box cars. From 500 bushel capacity they gradually increased in size to 1000 bushels and on up to 1400 bushels. It was at this point that the first "checking devices" appeared. Prominent among them were the De Muth check letter system and the Fisher dial system. The "on-ratio" of the scales was generally maintained at 1 lb. to 1000 lbs., although in a few cases the ratio ran as high as 1 lb. to 2000 lbs.

The new century brought us 2000 bushel scales,

printing beam checking systems, weight lifting devices and garners for all hopper scales. The track scale also came in for its share of evolutions. It is a far cry from the old light capacity 60 ton scale that rested on wooden sills in a shallow mudhole to the modern all steel 100 ton scale with its attendant water-proofed, lighted and ventilated concrete pit. In some localities, especially where the unloading is accomplished by means of the automatic car-dumper, the track scale plays an important part, but even in these localities, the garnered, hopper scale is still predominant.

Impartial Weights Taken For Granted

Along with better scales and equipment have come better methods of supervision and it is a distinct compliment to the men who look after the weighing that both buyer and seller, after reaching an agreement on price and quality, take it for granted that correct, impartial weights are available as a primary basis of the transaction.

Where are we going from here? We have always had as our goal scales large enough to weigh a carload in one draft. I believe if box cars increase in capacity scales will be built to keep pace with them. At the present, the race seems to be in favor of the scale builders, for the new 150,000 lb. beam hopper scales amply take care of the 100,000 lb. capacity box cars. True, many elevators have smaller scales than this but even a scale built on those small proportions can handle the average box-car in not more than two drafts, unless, of course, the car is heavily overloaded. But we are talking now about the newest scales and the newest box cars. The "large load" of today will run about 120,000 lbs. The new 150,000 lb. capacity scale handles that with 30,000 lbs. to spare.

Box Cars To Stop Growing

I believe it is safe to predict that the present 100,000 lb. capacity, 40 foot box car now in general use will not be increased in size in the near future. The bridge and tunnel clearances of the railroads assure that. Also, the grain trade, the milling trade and other industries do not favor the extremely large capacity cars, except, of course, for special purposes.

We find, though, that very often the railroads supply cars of larger capacity than what was ordered. This does not make for an economical use of their equipment and hence, should act as a deterrent to increasing the capacity of cars.

The life of the average hopper scale is equal to the life of an elevator, so until some of the old elevators are pulled down, we will still have some of the older type scales. But this need not cause alarm for so long as these scales are regularly checked by the efficient type of inspection now in force, the proper degree of tolerance will be maintained.

GRAIN *Spouts* AND *Linings*



JOHN S. BUSH

by JOHN S. BUSH
Kingston Elevator Company,
Kingston, Ontario



THE inclination of oftime necessary additional grain spouts to the horizontal is most important, for in a modern elevator grain handled with speed "chokes" can cause a lot of trouble.

An angle of thirty degrees should always be used if possible and never less than twenty-five, although such clean grain as hard wheat, corn, etc., will flow easily in a twenty-five degree angle spout providing the feed is not "forced" too much—however, a new spout will not carry its maximum feed until the surface has acquired its polish and friction reduced to a minimum.

If the altitude and horizontal distances are known and it is desired to find the angle of inclination to the horizontal, the altitude is divided by the horizontal distance in the same units of length. The result will be the tangent of the angle as in Figure 1.

Co-Efficient of Friction

The co-efficient of friction for grain and steel is 0.414 for wheat, 0.412 for oats and 0.376 for barley, representing angles of $22\frac{1}{2}$ to $20\frac{1}{2}$ degrees from the horizontal. Wheat will show a friction value on polished steel, however, of 0.3411.

The usual size of spout is 24 inches wide by 16 inches deep and is large enough for general handling of grain in up-to-date elevators. Under favorable conditions a spout of these dimensions will carry from 40,000 to 50,000 bushels per hour. Spouts are usually constructed in four pieces, top, bottom and two sides flanged $1\frac{1}{2}$ inches.

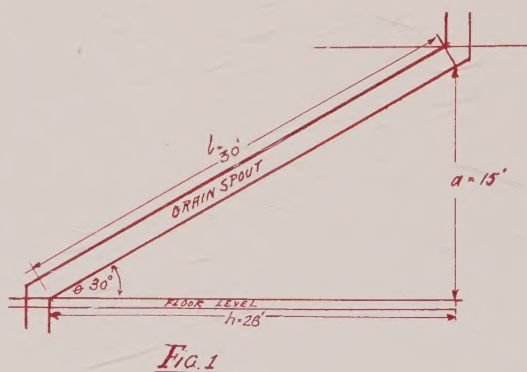
Annealed 12-gauge sheet steel is best suited for this work, and much care should be taken in making

joints. Butt joints with straps are preferable to lap joints; not only do butt joints make a smoother surface for the grain to slide over but they will be found easier to dismantle, and lining will be found to fit more accurately. For a lap joint the surface of the spout must be leveled with small strips of metal or wood to insure a perfectly even surface for the seam of the butt to rest upon. (The effect of a lap joint will undoubtedly have been noticed by many as the grain will jump over the lap and wear the next plate quite badly a foot or so down the spout.)

Air Space Important

Air space should be about 50 per cent of that used for grain so as to provide for maximum flow. And the steeper the spout the more air space is required,

so turns must be constructed to avoid cutting off the air. Where a spout makes a sharp turn, or two spouts join at an acute angle, it must be built higher on the sides for the same reason. If the drop is sharper after the turn, it is often necessary to provide a vent in the spout at the turn to avoid a vacuum condition which will check the flow of grain. (A vent pipe of this kind is generally installed on car loading spouts where the velocity of the grain is great in



the vertical drop.)

Lining Spouts and Hoppers

Lining spouts is a subject often discussed. Rubber linings have been suggested and are in use in many places. Why rubber is considered at all is hard to understand unless it is that old conveyor belts may be used after they have served their original purpose, also their comparative ease to install. But a lining is installed to resist abrasion and therefore

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At left—REDLER Conveyor-Elevator at Reistons-Purina Company, Lafayette, Indiana. Handles corn or soy beans. REDLER discharges through traveling spout. Second spout, not shown, discharges to cars.

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must be a material with a low coefficient of friction—a hard, smooth surface. Rubber belting has a much higher friction value than steel. If old conveyor belting is used it will no doubt have very little rubber covering left, and will be worn to the canvas plies in a short time, resulting in a still higher coefficient of friction.

With clean grain, the co-efficient of friction is 0.3772 for rubber belting and 0.5630 for canvas. The angles of friction for these two materials are $20\frac{1}{2}$ and $29\frac{1}{2}$ degrees, respectively, which means that a spout lined with old, worn belting will require an angle of 40 degrees or more to carry a maximum flow. Oats, screenings, etc., will require a still steeper incline. Steel lining of No. 10 gauge or heavier will last four or five years, carrying upward of 20,000,000 bushels of grain, providing all joints and bends are checked for warping and adjusted each year.

Expansion and Contraction A Factor

Temperature variations will give steel plate an expansion and contraction range of $\frac{1}{8}$ inch in ten feet. For this reason liners should be well bolted to the main spout so this action can take place uniformly between spout and liner. A plate 36 inches in width

makes a good lining for a 24 inch spout, as shown in Figure 2 but the bottom must be $\frac{1}{2}$ inch narrower

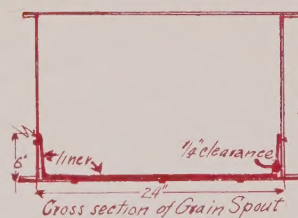


Fig. 2

when bolted. At bends and junctions, to take care of the splash of grain, small plates can be fitted over the main liner.

Receiving hoppers sometimes present a little difficulty to line, especially if they are off-set or diverted from the center line of the spout; they then represent eight triangular faces. If each triangle is carefully measured separately, allowing for thickness of plate, and then pieced together in one plane, no difficulty should be encountered.

Mr. Bush's formulae and more detailed instructions for computing angles, dimensions, etc., for spouts and linings will be mailed by "GRAIN" on request. Mr. Bush also is anxious to hear from those who have experimented along these lines and will welcome all suggestions sent either direct or through "GRAIN".



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Society COLUMN

ACCEPTS HONORARY MEMBERSHIP

There is a great satisfaction in being able to be of some service to fellow man, and when my feeble efforts have been so appreciated by the Society that they unanimously voted me an Honorary Life Member it surely makes one feel that life, after all, is worth while. I think I have been given entirely too much credit, for after all, if your undertaking was not worth while, it could not gain the support of the number it has, and of course, would not be lasting.—Otto F. Bast, Vice President and General Manager, Union Elevator Co., Minneapolis, and First Vice President, Grain & Feed Dealers National Association, and many other business and association activities.

SOMETHING ALWAYS POPS UP

It has so happened each year that something would come up to prevent my attending the Society's convention and this year was no exception. I did intend to at least get to Minneapolis. You have a wonderful organization and I would have enjoyed hearing the speeches on many subjects in which I am interested very much. I am hoping to do better next year.—Rees H. Dickson, President, Kentucky Public Elevator Co., Louisville, Ky.



ALL MILLIONAIRES, HE THINKS

Although I look forward to another visit to North America it may occur that by then you all will be in retirement with other millionaires at Miami or Pasadena. However, if you continue sending me a notice of your annual convention it may be possible at some time for me to attend.—L. S. Harrison, Assistant Manager, Government Grain Elevators, New South Wales Department of Agriculture, Sydney, Australia.

HEARING GOOD THINGS

C. W. PARTRIDGE, Secretary, Association of Operative Millers, Kansas City, writes: Mighty glad that you had such a fine convention. You are developing your organization in fine shape and we are hearing a good deal about your splendid work.



MORE TIME NEXT YEAR

We did not have the time to attend this year's convention, but hope we may be able to attend a similar one at some later date.—D. H. Burney, Superintendent, Searle Terminal Limited, New Westminster, B. C.



INTERESTING DISCUSSIONS

HERBERT GEAR, Flanley Grain Co., Sioux City, Ia.: Sorry I was unable to get away for the convention. Am looking forward to a report of the proceedings as I know many interesting things must have been discussed. I can only hope for better luck next time.

COX FOSTERS EXPLOSION THEORY

National President Henry S. Cox, Superintendent of Star Grain Company's "Rialto" Elevator, Chicago, has consistently maintained that fumigant residues were responsible for dust explosions. The matter has come to the attention of the proper authorities and it is expected to have results of tests before long.

LIKES BULLETINS

W. E. COUFIELD, Member No. 1, Chicago, says: I was pleased to read of the wonderful convention that has just been held by the Society and I am sure the Society will grow much faster in the future than it has in the past—as anyone can see by the interest that is being shown in the meetings at each successive gathering. Want you to know that I am extremely grateful for this information the Society sends out in its Bulletins.

SUCCESSFUL

M. DWIGHT BELL, Consulting Engineer, Minneapolis: Those whom I have talked with were much pleased with the success of the convention, and I hope the officers, directors and committeemen feel well repaid for the work they put into it.

FOR MAXIMUM EFFICIENCY

I hope later to be able to enjoy affiliation with the Society, as I know that no superintendent—or in fact any business man in any responsible position can function to the maximum of efficiency when going it alone and missing the benefit of the views and experiences of those in a like line of work.—Earl R. Evans, Superintendent, Evans Elevator, Champaign, Illinois.

FROM SEATTLE

I wish the Society the best of success and know you will be a great help to the grain elevator industry. I should like to be a member.—W. H. Brownell, Manager and Superintendent Washington Co-operative Egg & Poultry Association, Seattle, Wash.

CONVENTION PACKED

H. L. HEINRIKSON, Terminal Grain Corp., Sioux City, Ia.: I feel highly honored in being elected as a Director and am more than pleased to hear of the financial standing of our organization. . . . Think, as a suggestion on improving the results of our conventions, we should not crowd so much into each meeting and put a time limit on talks with more round-table discussions after the meetings.

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history of Amer- with stars of ance. Many a from obscurity promise in this tunity and their taught school

children as shining examples. And in this teaching, the industry, integrity and vitality of the successful is pointed out as the source of the achievement. But, as a rule, the age of the ones who arrived on top was of ripened years. Not so Emil Buelens, The Glidden Company's Assistant Plant Superintendent of the Soya Products Division in Chicago, Illinois, for he, at the age of twenty-four years has already accomplished what most men fail to achieve in a lifetime.

Born in Chicago and educated in that city's public schools, he received his diploma from high school fired with the Windy City's unquenchable zeal of going forward. His classmates were unanimous in selecting the tall, quiet lad the Valedictorian. His next step was naturally into the grain business. "Ike" Weeks, late Superintendent of the old "Quincy" Elevator in Chicago, saw the young man take to grain like a duck to water. Martin Schultz, retired Superintendent of Chicago's "Santa Fe" Elevator, reports Mr. Buelens the most promising worker he ever employed. Superintendent Edward Westerman, for years at Schneider, Indiana, remains one of the staunchest supporters of his ex-employee — Emil Buelens. Grain men are seldom wrong and the three Superintendents mentioned each picked a winner when they hired "Soybean Emil."

When Mr. Buelens joined the Glidden Company, he started from the ground up. His practical Elevator knowledge and his keen interest in the comparatively new soybean soon brought him to the attention of his superiors and he began to mount the ladder of success. Grain circles were astounded when it was announced he had been appointed Superintendent of the Glidden Elevator—astounded because of his

Continued on Page 16

Talking Ears

by M. L. COBB, Superintendent of Grain

Spencer-Kellogg & Sons
MINNEAPOLIS, MINNESOTA

TWO years ago it became very apparent that we would have to have more speed and accuracy in the handling of the grain we received due to the variations in weights, types and proteins. We knew that it was necessary to develop some system whereby we could facilitate the handling in loading, mixing and lotting the grain.

The idea came to us that a direct communicating system would go a long way towards solving our problem so we contacted a technician and explained to him what we had in mind. With his assistance, our organization worked out our present communicating system.

This system consists of a master loud speaking set, which resembles a small radio, and it has from one to forty—possibly more—separate switch or station buttons on the panel. Each one of these stations may be connected by wire to a loud speaker situated at any point desired—for example, the cleaner floor, unloading pit, tunnel, scale floor, etc.

We have installed four specially constructed moisture and dust proof loud speakers of a new reversible type which are located in our main 650 foot tunnel.



SUPERINTENDENTS—

youth. But to the ones who knew him the news was accepted with a knowing grin. "Why not?" they queried. "This will be but his *first* step!" They were right—and The Glidden Company confirmed their judgment just a few days ago when they took their Elevator Superintendent into the general offices and offered the youthful, quiet man a private office with this stencilled on the door: EMIL BUELENS. ASSISTANT PLANT SUPERINTENDENT.

These are suspended from the ceiling of the tunnel at equal distances apart along the tunnel and are insulated with heavy rubber washers to reduce, as much as possible, the vibration from the moving machines that is carried through the concrete.

As an illustration as to the operation: If we are loading a certain grade of wheat which consists of a particular weight, type and protein, we will send our men into the tunnel to control the valves from the different lots of grain to be used in the mix. As soon as the complete mixture is laid upon the belt, the man in the tunnel will speak into the loud speaker (Illustration No. 4) indicating that everything is all ready. Our man in the laboratory immediately steps on the cat-walk to the head of the belt and cuts a sample from the stream of grain with a specially constructed pelican or sampler (Illustration No. 2.). The sample is taken to the laboratory at once where it is tested for weight and type. (Illustration No. 3.) After it has been tested, he steps to the master loud speaking set, presses down the small switch button on the front of the panel for whichever station he wishes to contact. Speaking directly into the speaker, he advises the men in the tunnel whether it is too heavy, too light, or gives whatever instructions are necessary. The men in the tunnel, without taking their hands from the valves or walking to the speaker, can hear this order from a distance of ten to fifteen feet from the speaker, regulate their valves, and ask any questions they desire. As stated before, it is a reversible speaker, delivering and receiving messages.

We have found this type of communication much faster than any other method we have tried, as it is as though a number of people were carrying on a conversation in the same room. It has been of untold value to us, especially in the past two years, as at all times it gives us practically instantaneous control of the activities of our entire organization regardless of where they may be located. This speaker is very inexpensive to install compared to the amount of good derived.

LIKE A BUG IN A RUG

We do not commonly think of a man as a hibernating animal, and he is not, under normal conditions. Yet he also is capable of invoking voluntary inanition in times of stress. Prof. Sergius Morgulis of the University of Nebraska College of Medicine tells of a hibernation-sleep resorted to by Russian peasants in famine times. They huddle together on the tops of their great flat stoves, by families, even by whole villages. Covered with all the fur coats available, drawing warmth from the stove and from each other, they conserve their life energies to the utmost, and with only a few unavoidable interruptions, wait for Spring in practically continuous sleep. — Science News Letter.



TASTY, EH?

That taste for food is a habit can be easily proved. Milk in the tropics is difficult to obtain. To meet this deficiency in Peiping a soybean preparation was developed which provided the essential ingredients of milk, but which was sickening and repugnant to the taste of anyone who first essayed it. Nevertheless, babies who had been brought up on this nauseating beverage loved it, clamored for it, absorbed it greedily and grew strong and healthy.—Dr. Victor G. Heiser.



Man, in the ideal, is so noble and so sparkling, such a grand and glorious creature, that over any of his faults all his fellows should run to throw their costliest robes.



REMEMBER?

DO YOU RECALL—the terrific explosion which ripped Chicago's waterfront for thirty miles . . . when the 10 million bushel Northwestern Elevator discovered it wasn't explosion-proof?

DO YOU RECALL—Joe Leiter's famous deal in corn?

DO YOU RECALL—The old Armour Company frantically erecting elevators to receive the grain delivered to them on contract?

A TRUCK DUMP OR NO

Whether it is better to be prepared to handle trucked lots of grain in the bigger centers, or not, is a problem confronting many. Those now handling it almost unanimously wished they weren't bothered for several physical reasons all of which increase operating costs and decrease the intended efficiency of the house.

Louisville, of course, trucks in grain from points north and sells grain products on the return haul. Dodge City can draw from a much wider area by catering to the trucks. Chicago can use the tonnage in its lake elevators to partially fill the billing lost by water movement; parallelly Peoria can supplement its local processing consumption. Cincinnati uses most of their trucked grain as a leverage on feed business. Albany cannot afford the high rail rates ex-lake and canal, which same reason—plus the prohibitive "back-haul rate" on by-products has caused decreased processing on the Atlantic seaboard.

Rail rates geared to "one-way" business apparently will not be changed to meet new trends; new lines will not be layed to accommodate new directional movements, to say nothing of the rails accepting the trucks as a necessary supplement. . . . But it is equally true that the development of trucked grain into terminal markets can and eventually would eliminate most country elevators and then each larger elevator would become a sort of base for a fleet of trucks—company operated—plying ceaselessly day and night, a highly unprofitable undertaking. . . . Of course the country elevators might counter with going around the larger center—as too much grain already does—but considering the problem in its entirety, particularly increased costs and frightfully hampered efficiency, the truck dump does not belong in larger elevators.

★

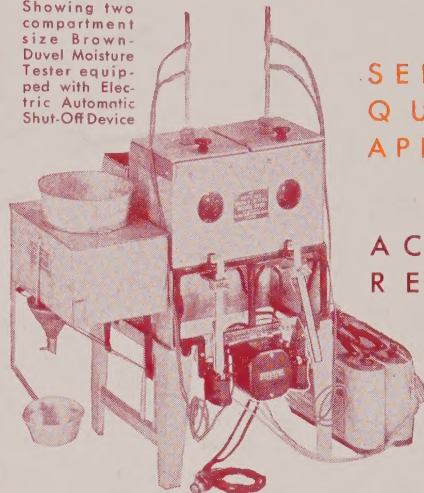
Hints & Helps

Fascinating to read and with intriguing illustrations, diagrams and drawings, the new Redler Conveyor-Elevator catalog shows just how these uncanny "U"-flight, dustless, explosion-proof conveyor-elevators function, shows capacities and power tables and various types installed in plants whose names are familiar to all of us . . . Want a copy? . . . Then just check the enclosed post card.



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Alfred L. Schaezner, Froedtert Grain & Malting Co.,
Inc., Milwaukee, has this to say about
CALUMET CUPS:

"We have installed CALUMET Buckets in our new storage and the results obtained have more than justified us in using this type of equipment. We were particularly impressed with the way a smaller leg fitted with two rows of 9x7 buckets easily took the grain away from our new car dumper. You will note that you have two orders for additional CALUMETS for replacement in our old house; and this should be apparent that we are entirely satisfied with the CALUMET."

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THE MAN TO TRUST

He may have a greasy hat,
and the seat of his trousers may be shiny,
and the banker may not be very well acquainted
with his signature;

but if you see his children
with their noses flattened against the window pane
watching for him a half hour before he is due home
for supper,

you can go right ahead and trust him with anything you have!

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American Society of Safety Engineers



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C. A. PATTERSON DIES

It is with very deep sorrow that I report the death of Mr. C. A. Patterson, Chief Electrician at our elevator, writes H. W. Feemster of the Western Maryland Railway Company of Baltimore, Maryland.

Mr. Patterson was several burned by a flash back on the 550 volt power cable into a fuse panel while he was renewing a fuse for a 5 H. P. motor on October twenty-seventh shortly after lunch. Although the burns were severe they should not have proven fatal, but other complications arose which caused his death the following

night.

Mr. Patterson was the highest type of man in every way as well as being one of our country's best informed on electrical subjects. "I consider him one of the peers in his profession, and the Electrical World has suffered a great loss through his death," Mr. Feemster says of him.

Member 128 of the Elevator Superintendents' Association, Mr. Patterson impressively addressed the organizations' convention in Buffalo in February of 1934 on "Power Factor." Truly a man's man, his contagious personality won him many friends and admirers, all of whom will mourn his untimely passing.

SHORT CIRCUITS

H. W. Feemster, General Superintendent of the Western Maryland Railway Company's Elevator, Baltimore, Maryland, has been "out of commission" due to an operation on his eyes.

Godfrey Morgan, Manager of Elevators, Spencer Kellogg & Sons, Inc., Buffalo, N. Y., Society Director, is another unfortunately on the sick list, but latest reports happily indicate his health is "on the mend."

W. A. Randall, Pacific Continental Grain Company, Portland, Oregon, for several years a Director of the Society, has been on the sick list for several months reports James Auld of Northwestern Malt & Grain Company, Chicago, who recently called on Mr. Randall while vacationing.

Phil Grotevant, Superintendent of Daniel F. Rice & Company's Grand Trunk Elevator, Chicago, had the misfortune of running a glass moisture tester condensing tube almost through his right hand.

O. H. Casner, William Kelly Milling Company, Hutchinson, Kansas, in testing a high voltage line was knocked from a ladder and had both arms and face severely burned by the flash of two exploding light globes.

CHICAGO CHAPTER DISCUSSES BARLEY

The pertinent subject of "Barley" was discussed by the Chicago Chapter of the Society of Grain Elevator Superintendents at their regular monthly meeting on November 9th. O. H. Phillips of the Board of Review, E. A. Josephson of Albert Schwill & Company, Albert Lyons and James Auld of Northwestern Malt & Grain Company all took up various phases of the topic—much to everyone's advantage. Vic Oliver of St. Paul dropped in on the meeting.

The Chapter's next gathering will be held on December 8th, starting with a plant inspection at 3 P. M. at the Arcady Farms Milling Company—where viewing a number of new and unique developments installed is eagerly anticipated. Well known Wirt Walker, Vice President, has promised to be on hand. Gil Lane, Chapter President, operates this plant.

AN URGENT REQUEST

To try to satisfy the insatiable demand for the July number of GRAIN will those who will give up their copies kindly mail them back at our expense? Thank you.

MINNEAPOLIS CHAPTER BUSY

Outstripping attendance of the long established Chicago Chapter, the newly formed Minneapolis group has been drawing crowds of close to fifty, and they're to be complimented on their extra-curricular activities which last month included radio's talented musicians, Mr. and Mrs. Green—he of the McGlynn Oil Company, Union Elevator's Jack Coughlin presided in the absence of Archer-Daniels-Midland's Chapter President, Vic Champlin. Their Next meeting is scheduled for November 24th.

Oscar Olsen of Duluth dropped in on the meeting.

MEMORANDUM



NEW FAD

The United States changed Franklin Delano Roosevelt's initials from F.D.R. to U.S.

DUST EXPLOSION DISCUSSION DECEMBER 1

Dr. David J. Price, Principal Engineer in charge of the Federal government's studies on grain dust explosions, is calling a meeting of the directors of the Dust Explosion Hazards Committee of the National Fire Protection Association at the Stevens Hotel, Chicago, for December 1, and will welcome any one interested.

Thirteen lives and \$607,000 is the toll taken by explosions in the past twelfth-month, Dr. Price reports.

Think It Over!

MR. PROSPECTIVE ADVERTISER



The far-touted drouth has frightened the weak.

But consider the movement of from 25,000 to 35,000 carloads of grain and their derivatives—just a thin pencil mark below normal on the chart of human endeavor.

Wearing, tearing, abrasive and cutting, the grain handling industry is consistantly a leading buyer of replacement equipment and new innovations to expedite efficient movement.

Some feel they are so well known they don't have to advertise to get the business; that's their misfortune. Others think the huge grain handling industry moves old equipment into new shells—as is common in some phases of processing; that's their mistake. Still a few more counter with the weakness that nothing new is introductive. Nothing is further from the truth.



The answer is:—

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